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Chief, TSD/Training

23 May 1960

Educational Specialist/CM

Document No. 35
NO CHANGE in Class.

Report on Operation of Audio Surveillance Equipment Course.

DECLASSIFIED
Class. CHANGED TO: TS S ⑥
DDA Memo, 4 Apr 77
Auth: DDA REG. 77/1763
Date: 070278 By: 025

I. INTRODUCTION

The writer of this memorandum monitored the Operation of Audio Surveillance Course from 9-13 May 1960 as a result of a request from the Chief, TSD/Training dated 9 July 1959. The purpose of this monitoring was to point out the strengths and weaknesses of this course and to make suggestions pertinent to the improvement of such training.

II. COURSE OBJECTIVES

The objectives as stated by the instructor were:

1. Perform operation of certain audio equipment.
2. Perform minor first echelon maintenance of this equipment.
3. Present instruction in the 'under the cover' operation of selected audio equipment."

(It is suggested that these objectives be rephrased to reflect statements in terms of student learning and outcomes.)

III. GENERAL COMMENTS

There were four students scheduled for this course but, because of personal reasons, only three attended. Their ranks were: 1 GS-12, 1 GS-13, and 1 GS-14. Two were scheduled for overseas assignments, one in June 1960, the other in August 1960. One was from DDP/AP/ [REDACTED] 25X1A and was preparing to run a one man station for which he desired this course knowledge in the event he had to use such equipment. The second was from W/ [REDACTED] and was preparing to be a member of a technical team for which he had to have the capability of operating audio equipment. He is a recent graduate of the Audio Surveillance Management Course [REDACTED]. The third was the writer of this memorandum who is a graduate of the Audio Countermeasures Course at [REDACTED] and is also reasonably familiar with the Audio Surveillance Management Course.

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IV. STRENGTHS

The instructor of this course is a very adept instructor giving attention to the application of many good principles of learning/teaching in his instruction. He made worthwhile use of questioning techniques in his instruction, particularly in the "review or summary" sessions. He had a number of good training aids and illustrated the proper concepts in their use. The class demonstrations were very capably performed.

V. SUGGESTIONS

The following suggestions are made with the thought that they will contribute to some degree in the improvement of instruction and student learning. These suggestions have been discussed with the instructor prior to completing this memorandum.

1. It is suggested that the most immediate critical need for the improvement of this course would be the production of lesson plans, which in fact, do not exist. A general course outline and subject coverage is in being and from this the instructor presents his daily work. Because of emergency personal reasons the regular instructor was absent the first day of this course. A substitute instructor, well qualified from the technical aspect, took over. The instruction the first day obviously did not go as smooth as the remaining days or as smooth as if adequate lesson plans were available and could be followed. This situation served as a beautiful illustration of one important use of good lesson plans.

2. Coupled with the comment on lesson plans would be the suggestion that TSD/Training personnel should be adequately cross-trained in several courses other than their own specialty. This means more than just being a graduate of a course and then assumed to be qualified as an instructor in the course. This means actually teaching at least one complete running of the course under the guidance of the regular instructor.

3. The subject matter presented in this course should be included (if not already included) in the Audio Surveillance Management Course [redacted]. Inclusion of this material, since most or all of the equipment is studied in the ASM/C would not cause any lengthening of that course but would be assumed to be a requirement as a functional part of understanding and operating the equipment. This would eliminate the necessity of a graduate of the ASM/C taking the Operation of Audio Surveillance Equipment Course at headquarters.

4. If the subject matter content as presented in this course is retained in future courses, it is suggested that the

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sequence particularly be revised. As presently taught, the course sequence skips from one general type of equipment to another, which does not provide good continuity of thought for the student in reinforcing his knowledge and skills in learning the maintenance and operations required in this course. For example, it is suggested that the several types of tape and wire recorders be taught as a first unit, pointing out their specific uses, advantages, disadvantages, maintenance, and repair considerations. The next several units would be the radios, transmitters, receivers, microphones, etc. followed by the [redacted] and associated equipment. As presently constituted, the course presents these last two units in sequence but the subject matter related to the recorders is dispersed through the course.

5. The writer of this memorandum makes no claim to be a subject matter specialist in this field of Audio Surveillance Equipment. The suggestion is made; however, that the OASE instructor review and analyze the subject matter offered to determine the actual necessity of giving it as a formal course. In fact, it would be highly desirable if the instructor would ascertain from former students the extent of their use of this course knowledge as well as any suggestions they might have to use in possibly revising the course. Making the assumption that all students in this course have an average or above mentality and manual dexterity ability, the questions are raised, "Cannot the student adequately perform the operation and maintenance of this equipment (as presently taught) by reading the operating and first echelon maintenance instructions published by the manufacturer?" or "Should TSD see to it that clear, concise and illustrated operating and first echelon maintenance instructions are prepared for such equipment and accompany the equipment when it is sent to the field?" An assumption also appears to be true that a "technician" is on hand to install, adjust, and start operation of this equipment. It seems logical that, at the time, this "technician" would "check-out" personnel on hand to continue the operation of the equipment and to perform first echelon maintenance, and these personnel, in turn, could "check-out" their replacements. Rather than suggest that this course be declared superfluous and written-out of the regular TSD training catalogue, it is suggested that formal training capability of this present course be available on a need basis.

6. The instructor might consider the advisability of using a "trouble-shooting" technique of instruction. Since the course is to teach certain levels of maintenance and operation of equipment, giving the student equipment previously prepared with "troubles" and requiring him to locate and remedy the "trouble" would be a good problem-solving method of instruction which would be more effective and retained longer than the routine method of adjusting and oiling.

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7. For a class ratio of 1-3 or less, the training aids used in the course appear adequate particularly since the actual equipment was used in lieu of any aids. If, however, the class ratio would be 1-6 or so, more sophisticated type training aids should be developed. For example, in adjusting the [redacted] relays, a series of colored slides or vu-graph transparencies would be appropriate since only one or two students could observe at one time the actual proper adjustment procedures. Vu-graph slides illustrating microphone installations, proper connections of the various audio equipment, etc. would be advantageous and preferred over charts. The instructor should give consideration to the development of vu-graph slides using the technical animation technique since this device is most appropriate to the subject of current flow and operation of equipment. Generally speaking, where there is adequate equipment available, where the class size is small, where no danger is possible to either the student or the equipment, etc. actual equipment is preferred to mock-ups, etc. If, however, any of these elements cannot be met, then the instructor should have the proper type of training aids available.

8. Attachment A (TSS Course Critique Form) appears to be useful to the instructor since most of the questions ask for fairly specific information. The first question probably provides very little of value to the instructor in making course modifications because of its generality. The limited space provided for writing responses probably discourages some students from getting specific enough to be of maximum use. There should be at least twice as much space provided for each item, particularly the last main question. A systematic analysis of responses from past critiques might throw some light on whether this form has been producing anything of value. If only worthless generalities show up, it would suggest that more pinpointed questions would be in order. Although somewhat general in nature, two questions which frequently produce information of some value to course modification are: (1) What do you consider the best features of the course? and (2) What do you feel were the weakest parts of the course?

9. Attachment B (TSS Evaluation form) might merit consideration as to modification. During the course the instructor uses no objective means of evaluating student performance. For this type of course such a technique is not a prime requirement but could be instituted to assist him in forming final evaluation statement. The Evaluation Form, however, requires the instructor to choose one of four specific rating levels on his own observation and judgment of student performance (mental and physical) during the course. This type of subjective

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evaluation action is not the soundest nor the most valid and might conceivably misinform the student's supervisor when he reads and interprets the completed evaluation. If it is the intent and desire of the instructor to factually rate each student on certain knowledge and skills using scaled ratings, it is suggested that some objective means be developed to assist in this evaluation. If, however, it might be the desire of the instructor to inform the student and his supervisor as to the student's strengths and weaknesses or level of attainment as demonstrated in this course, a different method of reporting should be devised. For example, a revised Evaluation Form might include a statement of the course objectives and a narrative statement of how and what the student was taught and just what activities the student was required to perform. The form would also include statements by the instructor describing what he believed was the student's strengths and weaknesses as noted by his performance in the course. Further, the seventh item "Technician Potential" including the explanatory "NOTE" places the instructor in an extremely critical situation in trying to predict or "estimate" a student's future potential especially when no factual back-up data are available. It is believed that the instructor should not attempt an assessment type of rating but hold to current course ratings since too many facets enter into making a rating which is "an estimate of the technical ability the student might acquire after advanced instruction and practice . . ."

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Attachments
As stated above

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T S S E V A L U A T I O N

NAME _____

DIVISION _____

SUBJECT _____

DATES TRAINED _____

E V A L U A T I O N:

1. Comprehension of Principles
2. Alertness and Interest
3. Operational Appreciation of Subject
4. Manual Dexterity
5. Care in Work
6. Aptitude
7. Technician Potential

NOTE: "Technician Potential" is an estimate of the technical ability the student might acquire after advanced instruction and practice--it is not an estimate of his current level of technique.

Ratings: Poor, Average, Good, Excellent.

Please return five copies of this form to TSS/TRD for overt distribution.
Please return three copies of this form to TSS/TRD for covert distribution.

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